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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,356	03/16/2004	Johan Loccufier	27500-202	2124

7590 10/16/2008
Joseph T. Guy Ph.D.
Nexsen Pruet Jacobs & Pollard LLP
201 W. McBee Avenue
Greenville, SC 29603

EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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10/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,356	Applicant(s) LOCCUFIER ET AL.	
	Examiner Betelhem Shewareged	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 27-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response filed on 07/14/2008 has been fully considered. Claims 8-26 and 32-43 are canceled, and claims 1-7 and 27-31 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumioka et al. (US 2003/0072923 A1) in view of Omatsu et al. (EP 1 251 154 A1).
4. Claim 1: Sumioka teaches an ink jet recording material comprising a support and an ink receptive layer on the support (abstract). The ink receptive layer comprises additives [0059]. Sumioka does not teach the claimed non-polymeric compound recited in current claim 1 as the additive. However, Omatsu teaches an ink jet ink composition comprising a compound of formula I (abstract), and a suitable example of formula I includes compound (I-73) (see page 32). Sumioka and Omatsu are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine compound (I-73) of the ink composition of Omatsu with the invention of Sumioka, and the motivation would be, as Omatsu suggests, improving image fastness of the dye [0010]. Thus, adding compound (I-73) in the ink receptive

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layer of Sumioka yields predictable result such as improved image fastness. (See

MPEP 2141(I))

The Supreme Court in KSR reaffirmed the familiar framework for determining obviousness as set forth in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966)), but stated that the Federal Circuit had erred by applying the teaching-suggestion-motivation (TSM) test in an overly rigid and formalistic way. KSR, 550 U.S. at ___, 82 USPQ2d at 1391. Specifically, the Supreme Court stated that the Federal Circuit had erred in four ways: (1) "by holding that courts and patent examiners should look only to the problem the patentee was trying to solve" (Id. at ___, 82 USPQ2d at 1397); (2) by assuming "that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem" (Id.); (3) by concluding "that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try" (Id.); and (4) by overemphasizing "the risk of courts and patent examiners falling prey to hindsight bias" and as a result applying "[r]igid preventative rules that deny factfinders recourse to common sense" (Id.). In KSR, the Supreme Court particularly emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," Id. at ___, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. Importantly, the Supreme Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." Id. at ___, 82 USPQ2d at 1395. The Supreme Court stated that there are "[t]hree cases decided after *Graham* [that] illustrate this doctrine." Id. at ___, 82 USPQ2d at 1395. (1) "In *United States v. Adams*, . . . [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." Id. at ___, 82 USPQ2d at 1395. (2) "In *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, . . . [t]he two [pre-existing elements] in combination did no more than they would in separate, sequential operation." Id. at ___, 82 USPQ2d at 1395. (3) "[I]n *Sakraida v. AG Pro, Inc.*, the Court derived . . . the conclusion that when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." Id. at ___, 82 USPQ2d at 1395-96 (Internal quotations omitted.). The principles underlining these cases are instructive when the question is whether a patent application claiming the combination of elements of prior art would have been obvious. The Supreme Court further stated that:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. Id. at ___, 82 USPQ2d at 1396. When considering obviousness of a combination of known elements, the operative question is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." Id. at ___, 82 USPQ2d at 1396.

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5. Claims 2-4: Sumioka teaches the ink receptive layer further comprises inorganic particles such as silica, alumina and alumina hydrate [0017].

6. Claims 5 and 6: Sumioka teaches the ink receptive layer further comprises a binder such as polyvinyl alcohol [0023].

7. Claims 7 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumioka et al. (US 2003/0072923 A1) in view of Omatsu et al. (EP 1 251 154 A1).

8. Claim 7: Sumioka teaches an ink jet recording material comprising a support and an ink receptive layer on the support (abstract). The ink receptive layer comprises additives [0059]. Sumioka does not teach the claimed non-polymeric compound recited in current claim 7 as the additive. However, Omatsu teaches an ink jet ink composition comprising a compound of formula I (abstract), and a suitable example of formula I includes compound (I-73) (see page 32). Sumioka and Omatsu are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine compound (I-73) of the ink composition of Omatsu with the invention of Sumioka, and the motivation would be, as Omatsu suggests, improving image fastness of the dye [0010]. Thus, adding compound (I-73) in the ink receptive layer of Sumioka yields predictable result such as improved image fastness. (See MPEP 2141(I))

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In KSR, the Supreme Court particularly emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” Id. at ___, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. Importantly, the Supreme Court reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” Id. at ___, 82 USPQ2d at 1395. The Supreme Court stated that there are “[t]hree cases decided after Graham [that] illustrate this doctrine.” Id. at ___, 82 USPQ2d at 1395. (1) “In *United States v. Adams*, . . . [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” Id. at ___, 82 USPQ2d at 1395. (2) “In *Anderson’s-Black Rock, Inc. v. Pavement Salvage Co.*, . . . [t]he two [pre-existing elements] in combination did no more than they would in separate, sequential operation.” Id. at ___, 82 USPQ2d at 1395. (3) “[I]n *Sakraida v. AG Pro, Inc.*, the Court derived . . . the conclusion that when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.” Id. at ___, 82 USPQ2d at 1395-96 (Internal quotations omitted.). The principles underlining these cases are instructive when the question is whether a patent application claiming the combination of elements of prior art would have been obvious. The Supreme Court further stated that:

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When considering obviousness of a combination of known elements, the operative question is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” Id. at ___, 82 USPQ2d at 1396.

9. Claims 27-29: Sumioka teaches the ink receptive layer further comprises inorganic particles such as silica, alumina and alumina hydrate [0017].

10. Claims 30 and 31: Sumioka teaches the ink receptive layer further comprises a binder such as polyvinyl alcohol [0023].

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11. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumioka et al. (US 2003/0072923 A1) in view of Wong et al. (US 6,319,310 B1).

12. Claim 1: Sumioka teaches an ink jet recording material comprising a support and an ink receptive layer on the support (abstract). The ink receptive layer comprises additives [0059]. Sumioka does not teach the claimed non-polymeric compound recited in current claim 1 as the additive. However, Wong teaches an ink jet ink composition comprising a carbamate compound such as benzyl N-hydroxycarbamate and tert-butyl-N-hydroxycarbamate (col. 14, lines 14 and 35). Sumioka and Wong are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the carbamate compound of the ink composition of Wong with the invention of Sumioka, and the motivation would be, as Wong suggests, providing high quality, lightfast and water-fast, and exhibiting minimal feathering (col. 12, lines 59-67). Thus, adding carbamate compound of the above in the ink receptive layer of Sumioka yields predictable result such as improved quality, lightfast and water-fast, and minimal feathering (See MPEP 2141(I))

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When considering obviousness of a combination of known elements, the operative question is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at ___, 82 USPQ2d at 1396.

17. Claims 27-29: Sumioka teaches the ink receptive layer further comprises inorganic particles such as silica, alumina and alumina hydrate [0017].

18. Claims 30 and 31: Sumioka teaches the ink receptive layer further comprises a binder such as polyvinyl alcohol [0023].

Response to Arguments

19. Applicant's arguments with respect to claims 1-7 and 27-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is (571)272-1529. The examiner can normally be reached on Monday-Friday 9am-5pm.

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21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS

October 14, 2008.

/Betelhem Shewareged/
Primary Examiner, Art Unit 1794.